

9XSTREAM

WIRELESS MODEM

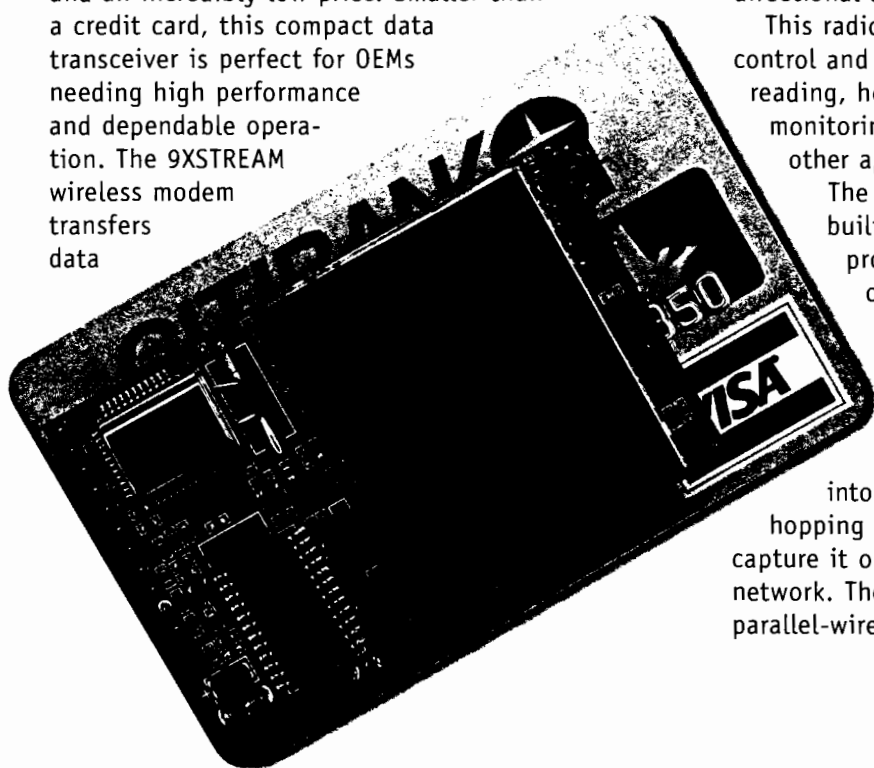
Meet the wireless modem with the best sensitivity (transmission range to power ratio) in the industry and an incredibly low price. Smaller than a credit card, this compact data transceiver is perfect for OEMs needing high performance and dependable operation. The 9XSTREAM wireless modem transfers data

at 9600 or 19200 baud up to 1/4 mile in a city environment or greater than 10 miles line-of-sight with a directional antenna.

This radio is perfect for applications in supervisory control and data acquisition (SCADA), remote meter reading, home automation, security, instrument monitoring, point of sale systems (POS) and myriad other applications.

The 9XSTREAM transceiver modules have built-in support for multi-drop networking protocols. Multiple independent networks can operate in the same vicinity by using distinct network identifiers.

The radios integrate quickly and seamlessly into any new or existing design. Simply output serial data from any microcontroller or RS-232 port into the radio to send FCC approved, frequency hopping spread spectrum data through the air and capture it on all receivers within range on the same network. The system behaves as a virtual half-duplex parallel-wired network.



Features

- Best sensitivity in industry for extended transmission range.
- Low power consumption. Suitable for battery powered applications.
- Small size.
- Low cost.
- Easy to integrate. No knowledge of RF necessary. Simple networking protocol.
- Standard serial digital interface. Interfaces with any microcontroller.
- Reliable data transfer performance.
- Choice of integral or separate external antennas.
- FCC approved with no further licensing or approval required.

MaxStream
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Exceeding Your Wireless Expectations

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General

Radio Frequency	902-928 MHz, unlicensed ISM band
Type	Frequency Hopping Spread Spectrum Transceiver
Frequency Control	Direct FM
Network Topology	Point-multipoint and Point-to-point Multi-drop Transparent networking
Channel Capacity	65,000 Network Identifiers share 25 hop channels
Serial Data Interface	Asynchronous serial CMOS signals, 5V
I/O Data Rate	1200, 9600, or 19200 bps, set at factory (performance specs vary with the data rate)

Performance

	9XSTREAM-12	9XSTREAM-96	9XSTREAM-192
Serial Interface Baud Rate	1200 bps	9600 bps	19200 bps
Data Throughput	9600 bps	9600 bps	19200 bps
Transmit Power Output	100 mW nominal	100 mW nominal	100 mW nominal
Rx Sensitivity	-110 dBm	-110 dBm	-107 dBm
Range*	Indoor: 600' to 1500' Outdoor: 7 mi. with dipole, >20 Mi. with gain antenna		
Interference Rejection	70 dB at pager and cellular phone frequencies		

*Range calculations are for 9600 baud radio, line-of-sight. Actual range will vary based upon specific board integration, antenna selection, environment and the OEM's device.

Power Requirements

Supply Voltage	5 VDC, +/-0.3V
Current Consumption	Tx 150 mA, Rx 50 mA, Power Down <10 μ A

Physical Properties

Board Size	1.6" x 2.7" x .35" (4.06 x 6.86 x 0.89)cm
Weight	0.8 oz. (24 g)
Connector	11 pin & 4 pin 0.1" spaced male Berg type headers
Operating Temperature	0°C to 70°C (-40°C to 85°C available)
Operating Humidity	10% to 90% (non-condensing)

Antenna

Antenna Connector	MMCX Female
Antenna Impedance	50 ohms unbalanced
Approved Antennas	Integral wire antenna (factory installed), 0 dBi gain
MaxStream Part Numbers	MAXQ9PT:MMCX - 1/4 wave flexible whip (3"), pigtail w/ MMCX male, 0 dBi gain MAXH9SMA - 1/2 wave flexible whip (6"), SMA, 2.1 dBi gain

Certification

United States	FCC ID: OUR9XTREAM
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Mechanical Overview

Connector Pinout:

Pin	Signal	Type	Description
1	CTS	Output	Clear to send Flow control
2	PwrDn	Input	Power Down
3	RX	Output	Receive Data
4	TX	Input	Transmit Data
5	NC	-	Reserved
6	*Reset	Input	Reset radio (assert low to reset)
7-9	NC	-	Reserved
10	Vcc	Input	5 VDC, +/-0.3V
11	Gnd	-	Signal and chassis ground

Ordering Information

Part Number	Description
9XSTREAM-12	1200 baud transceiver
9XSTREAM-96	9600 baud transceiver
9XSTREAM-192	19.2 kbaud transceiver

